RYAN VARYAN - APRIL 2021

Exploring Prime Areas in Bandung for Tourism Business Opportunity

IBM Data Science Capstone Project

Introduction

- Bandung is the capital city of West Java - Indonesia

- Bandung tourism industry increases exponentially

- Minimum information of tourist destination for foreigner

- This presentation is created for potential foreign investor to start tourism business in Bandung

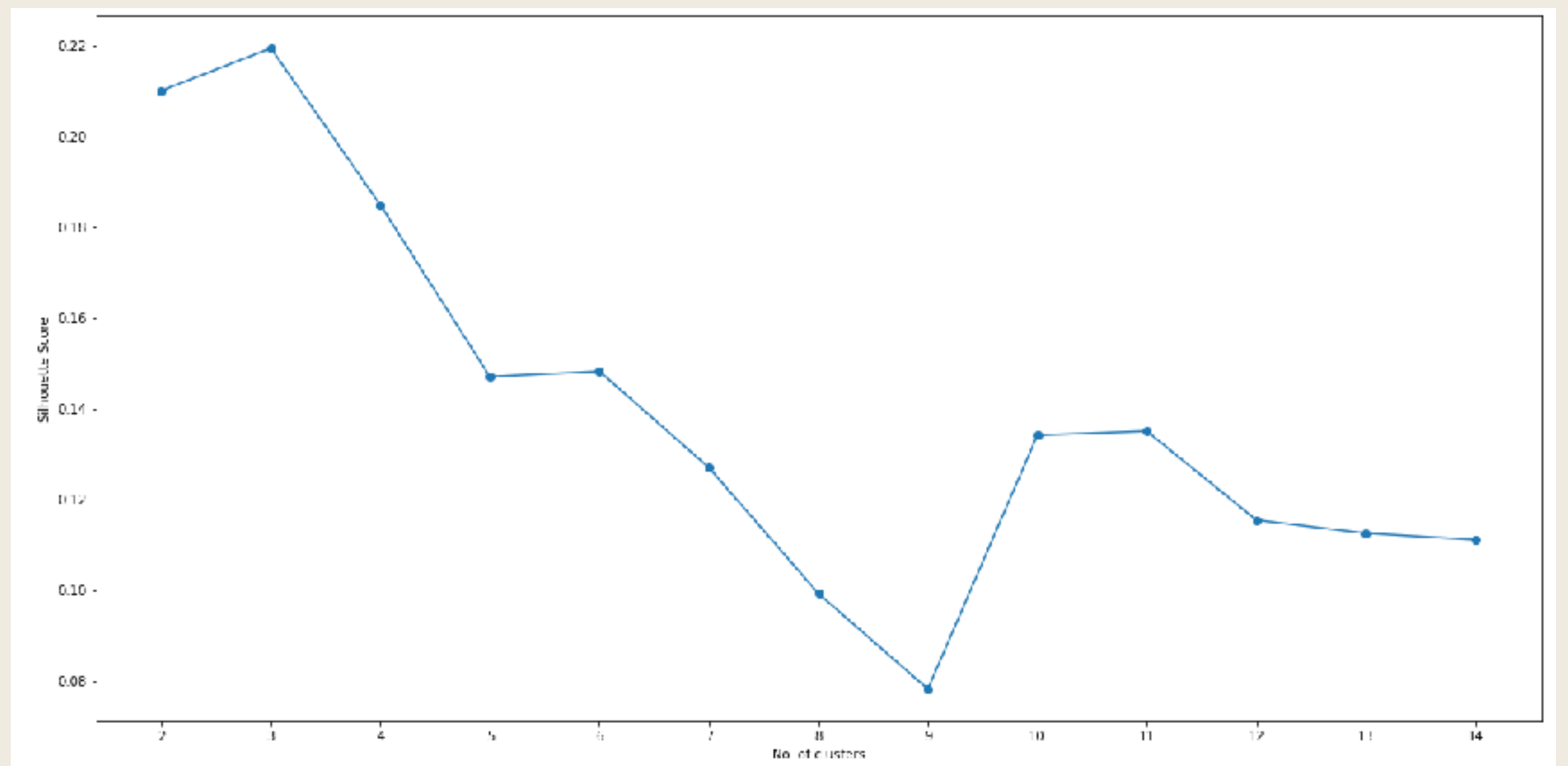Ref. https://en.wikipedia.org/wiki/Bandung

Data

- List of districts were obtained from Wikipedia

- Geo-coordinates of each district were taken from local government database

- Top venues of districts were obtained from Foursquare through an API

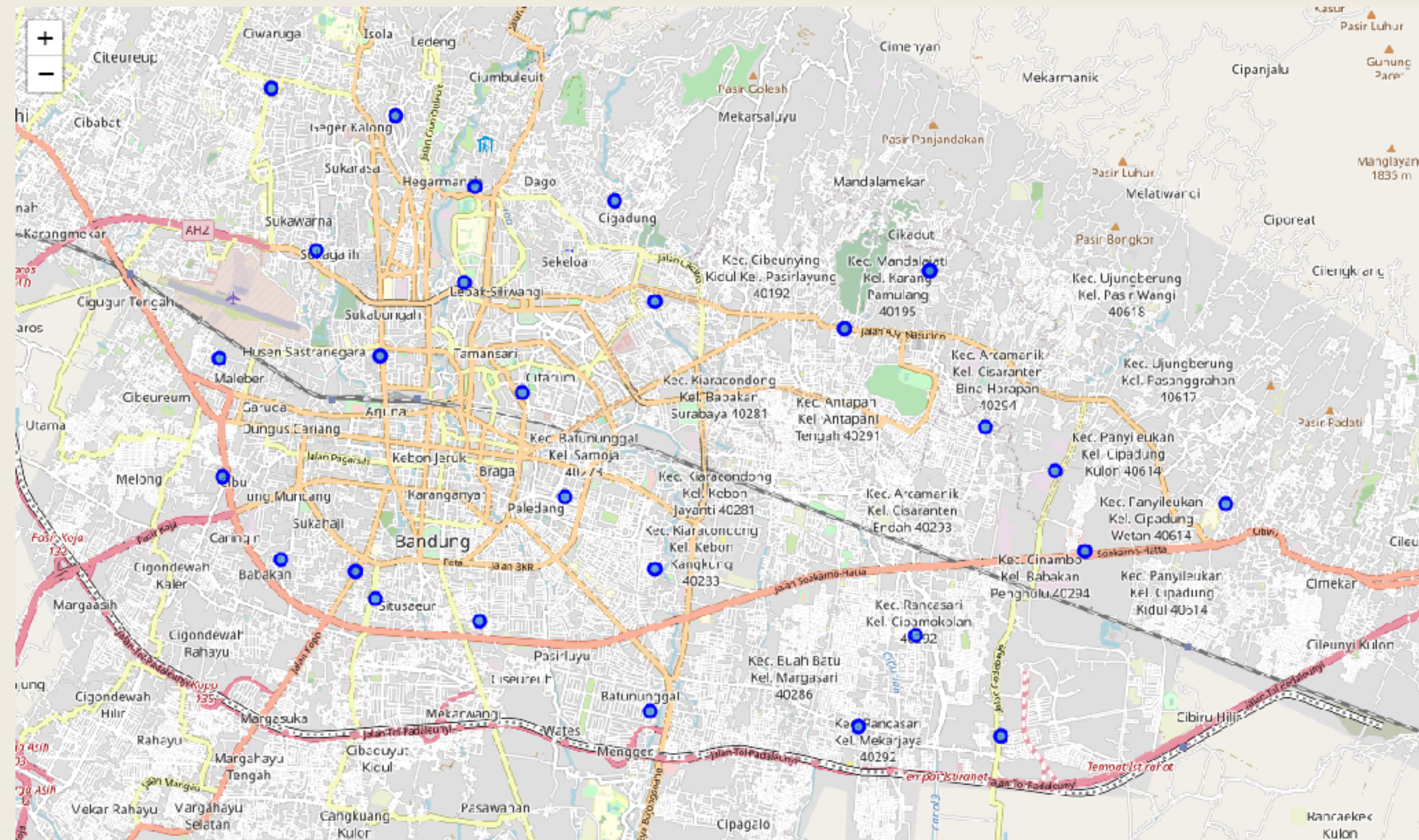|	Kode Kemendagri	Kecamatan	Jumlah Kelurahan	Daftar Kelurahan
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1	32.73.10	Astana Anyar	6	Cibadak Karanganyar Karasak Nyengseret Panjuna...
2	32.73.20	Antapani	4	Antapani Kidul Antapani Kulon Antapani Tengah ...
3	32.73.24	Arcamanik	4	Cisaranten Bina Harapan Cisaranten Endah Cisar...
4	32.73.03	Babakan Ciparay	6	Babakan Babakanciparay Cirangrang Margahayu Ut...
5	32.73.21	Bandung Kidul	4	Batununggal Kujangsari Mengger Wates
6	32.73.15	Bandung Kulon	8	Caringin Cibuntu Cigondewah Kaler Cigondewah K...
7	32.73.09	Bandung Wetan	3	Cihapit Citarum Tamansari
8	32.73.12	Batununggal	8	Binong Cibangkong Gumuruh Kacapiring Kebongeda...
9	32.73.04	Bojongloa Kaler	5	Babakan Asih Babakan Tarogong Jamika Kopo Suka...
10	32.73.17	Bojongloa Kidul	6	Cibaduyut Cibaduyut Kidul Cibaduyut Wetan Kebo...
11	32.73.22	Buahbatu	4	Cijawura Jatisari Margasari Sekejati
12	32.73.18	Cibeunying Kaler	4	Cigadung Cihaurgeulis Neglasari Sukaluyu
13	32.73.14	Cibeunying Kidul	6	Cicadas Cikutra Padasuka Pasirlayung Sukamaju ...
14	32.73.25	Cibiru	4	Cipadung Cisurupan Palasari Pasirbiru
15	32.73.06	Cicendo	6	Arjuna Husen Sastranegara Pajajaran Pamoyanan ...
16	32.73.08	Cidadap	3	Ciumbuleuit Hegarmanah Ledeng
17	32.73.29	Cinambo	4	Babakan Penghulu Cisaranten Wetan Pakemitan Su...
18	32.73.02	Coblong	6	Cipaganti Dago Lebakgede Lebaksiliwangi Sadang...
19	32.73.27	Gedebage	4	Cimincrang Cisaranten Kidul Rancabolang Rancan...
20	32.73.16	Kiaracondong	7	Babakansari Babakansurabaya Cicaheum Compreng ...
21	32.73.13	Lengkong	7	Burangrang Cijagra Cikawao Lingkar Selatan Mal...
22	32.73.30	Mandalajati	4	Jatihandap Karangpamulang Pasir Impun Sindangjaya
23	32.73.28	Panyileukan	4	Cipadung Kidul Cipadung Kulon Cipadung Wetan M...
24	32.73.23	Rancasari	4	Cipamokolan Darwati Manjahlega Mekar Jaya
25	32.73.11	Regol	7	Ancol Balonggede Ciateul Cigereleng Ciseureuh ...
26	32.73.07	Sukajadi	5	Cipedes Pasteur Sukabungah Sukagalih Sukawarna
27	32.73.01	Sukasari	4	Gegerkalong Isola Sarijadi Sukarasa
28	32.73.19	Sumur Bandung	4	Babakanciamis Braga Kebonpisang Merdeka
29	32.73.26	Ujungberung	5	Cigending Pasanggrahan Pasirendah Pasirjati Pa...
30	NaN	TOTAL	151	NaN

Methodology

- Data cleaning was performed to remove NaN, merge geo-coordinates with districts.

- Foursquare API was used to obtain the venues of each district within 1km radius.

- K-means clustering model was considered with total cluster of 3, based on silhouette score.
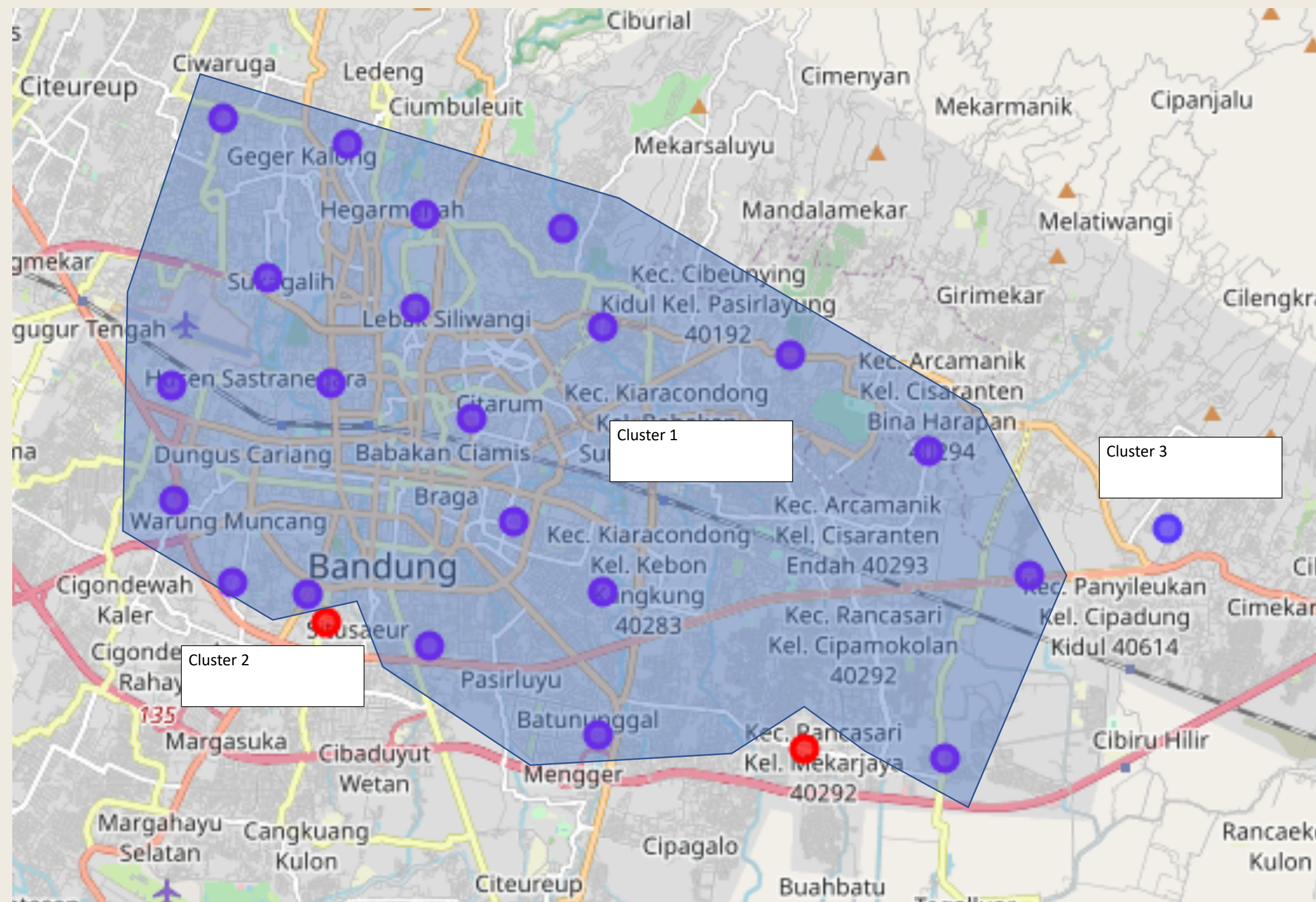
Location of Districts in Bandung

Discussion and Recommendations

Cluster 1 is the most promising location to setup tourism business

Cluster 2 and 3 may not be suitable due to missing venues which may support the tourism industry i.e. hotel.

Conclusions

- Cluster 1 is recommended for tourism business

- Further investigation is recommended to narrow down the area by considering other features such as total population of each districts

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